Exhibit 5

UNITED STATES PATENT AND TRADEMARK OFFICE
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BEFORE THE PATENT TRIAL AND APPEAL BOARD
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**NEC CORPORATION OF AMERICA, NEC CASIO MOBILE
COMMUNICATIONS, LTD., HTC CORPORATION, HTC AMERICA,
ZTE (USA), PANTECH CO., LTD., PANTECH WIRELESS, INC.,
LG ELECTRONICS, INC., and LG ELECTRONICS U.S.A., INC.,**

Petitioners,

v.

CELLULAR COMMUNICATIONS EQUIPMENT, LLC,

Patent Owner.
_____

Case IPR2014-01133

Patent 7,218,923

_____

**PATENT OWNER'S PRELIMINARY RESPONSE
UNDER 37 CFR § 42.107**

Mail Stop PATENT BOARD
Patent Trial and Appeal Board
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

IPR2014-01133   Patent 7,218,923

TABLE OF CONTENTS

IPR2014-01133   Patent 7,218,923

I.   INTRODUCTION

Patent Owner, Cellular Communications Equipment, LLC ("CCE"), submits this Preliminary Response that no review should be granted because Petitioners have not shown that there is a reasonable likelihood that Petitioners, NEC Corp. of America, et al., would prevail as to at least one claim of U.S. Patent No. 7,218,923 ("the '8923 patent").

Patent Owner acquired the '8923 patent from Nokia Siemens Networks ("NSN"), now known as Nokia Networks. NSN was joint venture between Nokia of Finland, and Siemens of Germany established in 2006 and is now a wholly owned subsidiary of Nokia.

Nokia first entered the telecommunications market in 1960. In 1982, Nokia introduced the first fully digital local telephone exchange in Europe. In 1991, the first GSM call was made with a Nokia phone. As one of the largest manufacturers of wireless devices, Nokia has routinely invested roughly 20% of its annual revenue into research and development of mobile communications technologies. Inclusive of NSN, Nokia invested more than 3 billion USD in 2013, of which 2.3 billion USD was invested through NSN specifically.

Today, NSN owns a large portfolio of almost 4000 patent families comprising approximately 11000 individual patents and patent applications across an array of technologies, some of which were transferred from Nokia and Siemens

IPR2014-01133   Patent 7,218,923

upon the formation of the business as NSN in 2007. NSN's patent portfolio

includes high-quality standard-essential patents (SEP's) and patent applications

which have been declared to European Telecommunications Standards Institute

(ETSI) and other Standards Developing Organizations (SDOs) as essential to

numerous standards, including LTE, WCMDA, TD-SCDMA, WIMAX, GSM,

CDMA 2000, and others.

On July 10, 2014, Petitioners filed a Petition for *Inter Partes* Review

("Petition") challenging the patentability of at least some of claims 1-5, 8, 9, 24-26,

31, 33, 39 and 40 of the '8923 patent, in view of the following references:

- US 7,836,494 to Richardson (Ex. 1007, hereafter "Richardson");

- GB 2,376,766 to D'Aviera (Ex. 1008, hereafter "D'Aviera");

- US 2004/0103159 to Williamson (Ex. 1009, hereafter "Williamson"); and

- US 2002/0065869 to Calder (Ex. 1010, hereafter "Calder").

Specifically, Petitioners asserted the following grounds:

- Ground I – Anticipation of claims 1-5, 8, 9, 24-26, 31, 33, 39 and 40 by Richardson;

- Ground II – Anticipation of claims 1-2, 4-5, 8, 24-26, 31, 39 and 40 by D'Aviera;

- Ground III – Anticipation of claims 24, 26 and 40 by Williamson; and

4

- Ground IV – Obviousness of claims 1-5, 8, 9, 24-26, 31, 33, 39 and 40 over Calder in view of Richardson.

None of the asserted grounds supports a reasonable likelihood that Petitioners would prevail as to at least one claim of the '8923 patent.

II.   SUMMARY OF ARGUMENT

Petitioners presented Grounds I-IV to challenge patentability of the claims of the '8923 patent. At least some of Grounds I-IV are redundant under the Board's recent decision in *Liberty Mutual Insurance Co. v. Progressive Casualty Insurance Co.*, Case CBM2012-2 (PTAB, Jan. 23, 2014) (Lee, APJ). Accordingly, Patent Owner respectfully requests that the Board deny institution of any and all redundant grounds consistent with the regulatory and statutory mandates of a speedy proceeding.

Further, the cited references, taken either alone or in combination, lack one or more material limitations recited in the claims of the '8923 patent.

For example, independent claim 1 of the '8923 patent recites a method for controlling application programs in a communication terminal, the method comprising:

> sending messages from an application program towards a communication network, the application program residing in a communication terminal;

diverting a message of the messages to a controlling entity residing in the communication terminal; and

based on the message, controlling in the controlling entity whether the application program behaves in a predetermined manner in the communication terminal, the controlling being performed before the message is transmitted from the communication terminal to the communication network.

(Emphasis added). The cited references, taken either alone or in combination, fail to teach or suggest at least the claimed two *separate* steps of "diverting a message of the messages to a controlling entity residing in the communication terminal," and "controlling in the controlling entity whether the application program behaves in a predetermined manner in the communication terminal, the controlling being performed before the message is transmitted from the communication terminal to the communication network," as recited in claim 1.

For example, claim 24 of the '8923 patent recites a terminal for a communication system, the terminal comprising:

an application program configured to send messages towards a communication network; and

a diverting unit configured to divert a message of the messages sent from the application program and destined for the communication network to a controlling entity residing in the terminal,

IPR2014-01133   Patent 7,218,923

> wherein <u>the controlling entity is configured to control, based on the message and before the message is transmitted to the communication network, whether the application program behaves in a predetermined manner in the communication terminal</u>, and

> wherein the terminal is a terminal of a communications system.

(Emphasis added). The cited references, taken either alone or in combination, fail to teach or suggest "a diverting unit configured to divert a message of the messages sent from the application program and destined for the communication network to a controlling entity residing in the terminal, wherein the controlling entity is configured to control, based on the message and before the message is transmitted to the communication network," as recited in claim 24.

Moreover, dependent claim 26 recites "[t]he terminal according to claim 24, wherein the controlling entity is configured to reside in a <u>tamper resistant area</u> of the terminal." The cited references, taken either alone or in combination, fail to teach or suggest each and every element of claim 24 in combination with the "tamper resistant area of the terminal," as recited in claim 26.

III.   OVERVIEW OF THE '8923 PATENT

The '8923 patent was filed in the U.S Patent and Trademark Office on June 8, 2004 (U.S. Application No. 10/862,878), and claims foreign priority to Finnish Application No. FL20031860, filed in the Finnish Patent Office on December 18,

2003. The '8923 patent was issued on May 15, 2007 including 40 claims, among

which claims 1, 9, 24, 33, 39, and 40 are independent.

The '8923 patent is directed to a method and mechanism for controlling the

rights and/or behavior of applications in a mobile terminal.[1] The controlling can be

done by a controlling entity or trusted agent 212 that resides in a tamper resistant

area 200 of the mobile terminal.[2] As shown in FIG. 2 of the '8923 patent,

reproduced below, applications 210_1 through 210_N can access the network through

a protocol stack 220 (e.g., a Session Initiation Protocol (SIP) stack).[3]
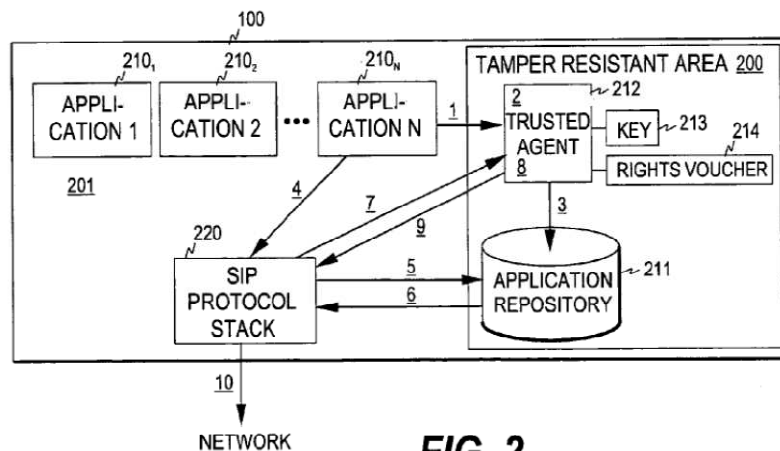
FIG. 2

In one embodiment, the rights and/or behavior of applications 210_1 through

210_N are controlled in connection with sending one or more INVITE requests or

messages to the network through a protocol stack (e.g., the SIP protocol stack 220)
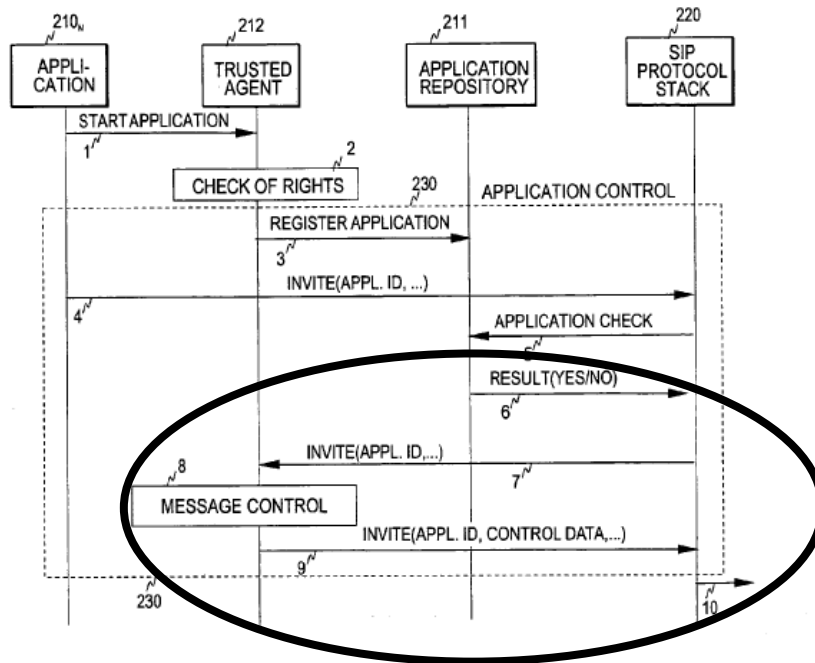
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[1] The '8923 patent at Abstract.
[2] Id. at 3:57-66.
[3] Id. at 4:2-4.

and subsequently to an opposite terminal.[4] FIG. 3 of the '8923 patent, reproduced

below, illustrates an example of the application controlling process by message

exchange between terminal entities.

FIG. 3

For example, when the protocol stack 220 receives an outbound INVITE

request generated by an application, the protocol stack 220 determines whether the

application needs to be controlled before sending the INVITE request to the

network.[5] If the application needs to be controlled, the INVITE request is then

selectively sent or diverted to the trusted agent 212 residing in the tamper resistant

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[4] Id. at 4:46-48.
[5] Id. at 4:53-57.

IPR2014-01133   Patent 7,218,923

area 200 (step 7).[6] The trusted agent 212 then examines the request and controls

whether the application behaves as it should be behaving (step 8).[7] If the

application does not need to be controlled, the protocol stack transmits the INVITE

request directly to the network, without diverting the INVITE request to the trusted

agent 212.[8]

IV.   PROPOSED CLAIM CONSTRUCTION

Pursuant to 37 C.F.R. § 42.100(b), a patent claim in an *inter partes* review

(IPR) proceeding should be given the broadest reasonable construction, as

understood by one of ordinary skill in the art, *in light of the specification* of the

patent in which it appears.[9] Patent Owner respectfully notes that the claim

construction standard in an IPR proceeding is different from that used in a federal

district court proceeding. As such, Patent Owner expressly reserves the right to

construct the claim terms differently in other proceedings involving the '8923

patent.

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[6] Id. at 4:57-61 and 2:23-32.
[7] Id. at 4:61-63.
[8] Id. at 5:5-8.
[9] Office Patent Trial Practice Guide, 77 Fed. Reg. 48756, 48766 (Aug. 14, 2012).

A.   Patent Owner's Comments on Petitioners' Proposed Claim Construction

Petitioners proposed claim construction to various terms in the '8923 patent. Patent Owner provides the following remarks as to Petitioners' proposed claim construction.

1.   "sending messages from an application program towards a communications network"

Petitioners referred to the "INVITE request" in the '8923 specification as corresponding to the "messages from an application program," and proposed that the term "messages from an application program" should mean "communications or data from the application." Petition at 13-14. Patent Owner opposes this claim construction as being unreasonably broad and inconsistent with the '8923 patent specification and the claims themselves.

Patent Owner respectfully notes that claim 1 recites "sending messages from an application program towards a communication network," (emphasis added). If not "diverted," as some of the messages are within the limitation of the claim, or allowed to proceed after assessment by the control entity, the messages must be suitable for sending towards a communication network for communication. For example, the '8923 specification at 4:46-48 states that "[a]fter the decryption, the application starts a session by sending an INVITE request … to the opposite terminal (step 4),". Accordingly, the '8923 patent makes clear that the INVITE

11

IPR2014-01133   Patent 7,218,923

requests cannot be just any communications or data from an application program.

Rather, the INVITE requests must be transmittable to an opposite terminal through

a communication network and thus must be provisioned in compliance with an

appropriate communications protocol. The specification of the '8923 patent

references the SIP protocol as one example embodiment.

In view of the above, Patent Owner disagrees with Petitioners' proposal and

instead proposes that the "sending messages from an application program towards

a communication network" should take its plain and ordinary meaning and should

mean:

> "messages that are sent from an application program towards a
> communication network."

Patent Owner submits that any raw information or raw data that are not

provisioned for and sent towards a communication network cannot reasonably

correspond to the claimed messages from an application program that are sent

towards a communication network.

2.   "diver[ting] a message of the messages"

Petitioners proposed that the term "diver[ting] a message of the messages"

should mean "transferring at least some of the messages to a different destination

than their intended destination." Petition at 14. Patent Owner disagrees with this

IPR2014-01133   Patent 7,218,923

proposed claim construction, and proposes an alternative claim construction below

including reasons therefor.

> ### 3.   "based on the message, control[ing]…whether the application program behaves in a predetermined manner"

Petitioners proposed that the term "based on the message, control[ing] …

whether the application program behaves in a predetermined manner should mean

"exerting control of the behavior of the application program based on a message

diverted to the controlling entity." Petition at 14. Patent Owner presently takes no

position on this proposed claim construction, and reserves the right to propose

alternative claim constructions if the Board institutes *inter partes* review.

> ### 4.   "diverting means" in claims 33 and 40

Petitioners stated that the term "diverting means" is a means-plus-function

recitation under 35 U.S.C. § 112(6), and proposed that the term "diverting means"

should correspond to the software executing the claimed "diverting" function, as

disclosed in the '8923 specification, and equivalents thereof. Petition at 16. Patent

Owner presently takes no position on this proposed claim construction, and

reserves the right to propose alternative claim constructions if the Board institutes

inter partes review.

5.   "authentication means" in claim 33

Petitioners stated that the term "authentication means" is a means-plus-function recitation under 35 U.S.C. § 112(6), and proposed that the term "authentication means" should correspond to the software executing the claimed "authentication" function, as disclosed in the '8923 specification, and equivalents thereof. Petition at 16. Patent Owner presently takes no position on this proposed claim construction, and reserves the right to propose alternative claim constructions if the Board institutes *inter partes* review.

6.   "connection set-up means" in claim 33

Petitioners stated that the term "connection set-up means" is a means-plus-function recitation under 35 U.S.C. § 112(6), and proposed that the term "authentication means" should correspond to the software executing the claimed "connection set-up" function, as disclosed in the '8923 specification, and equivalents thereof. Petition at 17. Patent Owner presently takes no position on this proposed claim construction, and reserves the right to propose alternative claim constructions if the Board institutes *inter partes* review.

7.   "sending means" in claim 39

Petitioners stated that the term "sending means" is a means-plus-function recitation under 35 U.S.C. § 112(6), and proposed that the term "sending means" should correspond to the software for performing the claimed "sending" function,

as disclosed in the '8923 specification, and equivalents thereof. Petition at 17-18.

Patent Owner presently takes no position on this proposed claim construction, and

reserves the right to propose alternative claim constructions if the Board institutes

inter partes review.

B.   Patent Owner's Proposed Claim Construction

In addition to the above remarks and proposed claim constructions, Patent

Owner proposes claim construction for the following terms.

1.   "divert[ing] a message of the messages"

Claim 1, for example, recites "sending messages from an application

program towards a communication network … [and] diverting a message of the

messages to a controlling entity residing in the communication terminal,"

(emphasis added). Claim 24, for example, recites "a diverting unit configured to

divert a message of the messages sent from the application program and destined

for the communication network to a controlling entity residing in the terminal,"

(emphasis added). Claim 33, for example, recites "diverting means for diverting a

message of the messages sent from the application program and destined for the

communication network to a controlling entity residing in a terminal," (emphasis

added).

The '8923 specification provides that, in one embodiment, a method of the

invention includes sending messages from an application towards a communication

network and diverting *at least one message destined for the communication network* to a controlling entity residing in the communication terminal, and that, in another embodiment, a terminal of the invention includes one or more applications configured to send messages towards a communication network and diverting means for diverting *selected messages* sent from an application and *destined for the communication network* to a controlling entity residing in the terminal.[10]

Accordingly, Patent Owner proposes that the term "divert[ing] a message of the messages to a controlling entity residing in a communication terminal" should mean:

> "redirecting a message of the messages to a controlling entity residing in a communication terminal."

2.   "the controlling being performed *before* the message is transmitted from the communication terminal to the communication network"

Claim 1, for example, recites "diverting a message of the messages to a controlling entity residing in the communication terminal; and based on the message, controlling in the controlling entity whether the application program behaves in a predetermined manner in the communication terminal, the controlling

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[10] The '8923 patent at 2:11-31.

being performed <u>before</u> the message is transmitted … to the communication network," (emphasis added).

Patent Owner submits that, upon review of the claims, one of ordinary skill in the art would readily understand that the claimed controlling must be performed *after* one of the messages sent towards the communication network is diverted (in a separate step) to the controlling entity, and *before* the diverted message reaches the communication network. Accordingly, Patent Owner proposes that the term "the controlling being performed before the message is transmitted from the communication terminal to the communication network" to take its plain and ordinary meaning without construction.

3.   "tamper resistant area"

Dependent claim 26 recites "a tamper resistant area of the terminal." The '8923 specification describes tamper resistant area 200 that can include, for example, trusted agent 212 and/or application repository 211, and can be used to store, for example, a secret key and/or policy rules.[11] Although the '8923 patent does not define the term "tamper resistant area," it is a term that is commonly used and well known in the relevant art. Accordingly, Patent Owner proposes that the

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[11] Id. at 3:57-4:10.

claimed "tamper resistant area of the terminal" should take its plan or ordinary

meaning without claim construction.

V.   SPECIFIC GROUNDS

A.   Redundancy

The Board makes clear that "multiple grounds, which are presented in a

redundant manner by a petitioner who makes no meaningful distinction between

them, are contrary to the regulatory and statutory mandates, and therefore are not

all entitled to consideration."[12]

Two types of redundancy are common. "The first involves a plurality of

prior art references applied not in combination to complement each other but as

distinct and separate alternatives… Because the references are not identical, each

reference has to be better in some respect or else the references are collectively

horizontally redundant."[13] "The second type of redundancy involves a plurality of

prior art applied both in partial combination and in full combination… There must

be an explanation of why the reliance in part may be the stronger assertion as

applied in certain instances and why the reliance in whole may also be the stronger

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[12] *Liberty Mutual Insurance Co. v. Progressive Casualty Insurance Co.*, Case
CBM2012-2 at 2 (PTAB, Jan. 23, 2014) (Lee, APJ).
[13] *Id*. at 3 (emphasis added).

IPR2014-01133   Patent 7,218,923

<u>assertion in other instances</u>. Without a bi-directional explanation, the assertions are <u>vertically redundant</u>."[14]

In this case, Petitioners asserted: (1) four grounds (i.e., Grounds I-IV) against independent claims 24 and 40 of the '8923 patent; (2) three grounds (i.e., Grounds I, II, and IV) against independent claims 1 and 39 of the '8923 patent; and (3) two grounds (i.e., Grounds I and IV) against independent claims 9 and 33 of the '8923 patent. Grounds I, II, and III are anticipation grounds respectively citing Richardson, D'Aviera, and Williamson. Ground IV is an obviousness ground citing Calder and Richardson. Pursuant to the *Liberty Mutual* decision, Grounds I, II, and III are horizontally redundant, and Grounds I and IV are vertically redundant.

1.   Independent claims 24 and 40

Petitioners asserted Grounds I through IV against independent claims 24 and 40 of the '8923 patent. As discussed above, Grounds I, II, and III are horizontally redundant. Petitioners did not explain in any respect why one of the cited references (i.e., Richardson, D'Aviera, and Williamson) would be better than another of the cited references. As such, pursuant to the *Liberty Mutual* decision, Patent Owner respectfully requests that the Board deny at least two of Grounds I,

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[14] *Id*. (emphasis added).

IPR2014-01133   Patent 7,218,923

II, and III as being horizontally redundant with respect to independent claims 24 and 40.

Further, as discussed above, Grounds I and IV are vertically redundant. Petitioners did not provide a bi-directional explanation as required by the *Liberty Mutual* decision. Accordingly, Patent Owner respectfully requests that the Board deny at least one of Grounds I and IV as being vertically redundant with respect to independent claims 24 and 40.

2.   Independent claims 1 and 39

Petitioners asserted Grounds I, II, and IV against independent claims 1 and 39 of the '8923 patent. As discussed above, Grounds I and II are horizontally redundant. Petitioners did not explain in any respect why one of the cited references (i.e., Richardson and D'Aviera) would be better than the other of the cited references. As such, pursuant to the *Liberty Mutual* decision, Patent Owner respectfully requests that the Board deny at least one of Grounds I and II as being horizontally redundant with respect to independent claims 1 and 39.

Further, as discussed above, Grounds I and IV are vertically redundant. Petitioners did not provide a bi-directional explanation as required by the *Liberty Mutual* decision. Accordingly, Patent Owner respectfully requests that the Board deny at least one of Grounds I and IV as being vertically redundant with respect to independent claims 1 and 39.

3.   Independent claims 9 and 33

Petitioners asserted Grounds I and IV against independent claims 9 and 33 of the '8923 patent. As discussed above, Grounds I and IV are vertically redundant. Petitioners did not provide a bi-directional explanation as required by the *Liberty Mutual* decision. Accordingly, Patent Owner respectfully requests that the Board deny at least one of Grounds I and IV as being vertically redundant with respect to independent claims 9 and 33.

In view of the above, that is, the failure of Petitioners to explain why alternative Grounds are necessary relative to the particular claims challenged, in the event that the Board does not deny *inter partes* review of the '8923 patent in its entirety, Patent Owner respectfully requests that the Board deny institution of any and all redundant grounds consistent with the statutory mandates of a speedy proceeding.

B.   Ground I Should Be Denied.

Patent Owner submits that no *inter partes* review should be instituted based on Ground I, because claims 1-5, 8, 9, 24-26, 31, 33, 39 and 40 of the '8923 patent are not anticipated by Richardson.

Independent claim 1, for example, recites a method for controlling application programs in a communication terminal, the method comprising, *inter alia*, "diverting a message of the messages to a controlling entity residing in the

IPR2014-01133   Patent 7,218,923

communication terminal; and based on the message, controlling in the controlling

entity whether the application program behaves in a predetermined manner in the

communication terminal, the controlling being performed before the message is

transmitted from the communication terminal to the communication network,"

(emphasis added). Richardson fails to teach or suggest the claimed diverting step.

Richardson is directed to systems and methods for regulating information

flow to and from an application 102, using a trusted agent 103 on a host machine

101 in conjunction with a security element 105, e.g., a firewall 110 or a policy

server 111, accessible via a network 104.[15]

Specifically, the trusted agent 103 detects packets destined to the network

104, and generates information useful for the firewall 110 or the security element

105 to decide whether to PASS or DROP the packet from the application 102.[16]

The information generated by the trusted agent 103 is then sent to the firewall 110

or the security element 105 to implement a system security policy and to decide

whether to PASS or DROP the packet.[17]

Alternatively, the trusted agent 103 can autonomously decide, without

involving a firewall, whether to permit the communication of a packet by, for

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[15] Richardson at Abstract and 1:15-17; see FIGs. 1 and 2 of Richardson.
[16] Id. at 3:24-29.
[17] Id. at 3:29-31.

IPR2014-01133   Patent 7,218,923

example, (i) verifying the credential of the applications seeking to communicate, or (ii) authenticating the application by determining whether it belongs to a set of "approved applications."[18] The communication is permitted if the credential can be verified, or if the application can be authenticated; otherwise it is not.[19]

Petitioners asserted that "the 'trusted agent' taught by Richardson provides the same function as the [claimed] 'controlling entity' … because it gathers information about an attempted communication, and makes a decision to block the communication based upon the trusted agent's decision." Petition at 26-27, emphasis added. Petitioners additionally asserted that "after 'a message is sent to at least one security element [the controlling entity,]' which resides 'in the operating system of the host machine[,]' the trusted agent 'makes an autonomous decision about whether to permit or from the application to take place.'" Petition at 27, emphasis added. Petitioner further states in Appendix A-1 re: claim 24b that "the messages are diverted to the trusted agent…" and later states that "Richardson inherently disclosed a program for diverting messages from application programs (diverting unit)." Regarding claim 1b, Petitioner makes a similar unsupported statement, "Richardson teaches that messages . . . from the first application is

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[18] Id. at 3:46-64 and 4:26-36.
[19] Id.

detected, the messages are diverted to the trusted agent for controlling (e.g. authentication)."

Accordingly, it is unclear whether Petitioners intended to characterize either the security element 105, or the trusted agent 103, or both, as corresponding to the claimed controlling entity. To the extent that any or both of the security element 105 and the trusted agent 103 could correspond to the claimed controlling entity, which Patent Owner disagrees, Richardson cannot disclose "diverting a message of the messages [sent towards a communication network] to a controlling entity," as recited in claim 1.

Patent Owner respectfully notes that to meet the claimed diverting step, there must be at least something that could at least logically divert a message destined to the network to a controlling entity in a communication terminal. In Richardson, regardless of whether a firewall is used or not, all communications or packets merely pass through the trusted agent 103 before transmitting to the network 104. No communication or packet in Richardson is "diverted" to any entity that could possibly constitute the claimed controlling entity. Therefore, Richardson cannot teach or suggest the claimed "diverting" step. By pointing to the same thing (trusted entity) for both the controlling and diverting steps, Petitioner is vitiating a claim element, namely, the diverting step.

24

Alternatively, to the extent that *only* the security element 105 could correspond to the claimed controlling entity, Richardson cannot disclose "the controlling being performed before the message is transmitted from the communication terminal to the communication network."

As evident from FIG. 1 of Richardson, reproduced below, the security element 105 is coupled to the trusted agent 103 via the network 104. [20] Accordingly, even assuming *arguendo* that the security element 105 could correspond to the claimed controlling entity that performs the claimed controlling step, the controlling is performed <u>after</u> (not before) the packets are transmitted to the network.

FIG 1

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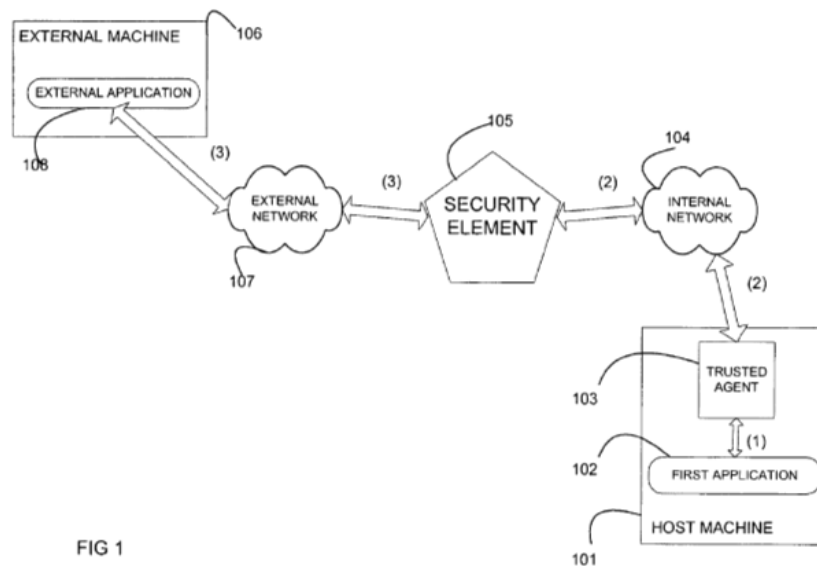
[20] Id. at 6:4-14.

IPR2014-01133   Patent 7,218,923

For at least these reasons, Richardson cannot teach or suggest, "the controlling being performed before the message is transmitted from the communication terminal to the communication network," as recited in independent claim 1.

Independent claim 24, for example, recites a terminal for a communication system, the terminal comprising, *inter alia*, "a diverting unit configured to divert a message of the messages sent from the application program and destined for the communication network to a controlling entity residing in the terminal," (emphasis added). Richardson fails to teach or suggest at least these elements.

As discussed above, Richardson does not disclose anything that could divert a message of messages sent towards the network 104 to the trusted agent 103 or security element 105. For at least these reasons, Richardson fails to teach or suggest "a diverting unit configured to divert a message of the messages sent from the application program and destined for the communication network to a controlling entity residing in the terminal," as recited in claim 24, (emphasis added).

Claim 26 depends from claim 24 and recites "the controlling entity is configured to reside in a tamper resistant area of the terminal." (Emphasis added) Richardson fails to teach or suggest these limitations.

26

To the extent that Richardson's security element 105 can correspond to the claimed controlling entity, Richardson at best discloses that the security element 105 is external to the hosted machine 101.[21] Even assuming *arguendo* that Richardson's host machine 101 could include a tamper resistant area, Richardson does not disclose that the security element 105 could be configured to reside in that tamper resistant area of the host machine 101.

For at least these reasons, Richardson cannot teach or suggest a combination, wherein "the controlling entity is configured to reside in a tamper resistant area of the terminal," as recited in claim 26. Richardson thus cannot anticipate claim 26.

Claims 2-5, 8, 9, 25, 31, 33, 39 and 40 either recite or require claim elements similar to those recited in independent claims 1 and 24. Accordingly, Richardson cannot anticipate claims 2-5, 8, 9, 25, 31, 33, 39 and 40 for at least the same reasons as independent claims 1 and 24. Therefore, Ground I should be denied.

C.   Ground II Should Be Denied.

Patent Owner submits that no *inter partes* review should be instituted based on Ground II, because claims 1-2, 4-5, 8, 24-26, 31, 39 and 40 of the '8923 patent are not anticipated by D'Aviera. In particular, Petitioner has not shown where D'Aviera discloses the claim limitations relating to "diverting a message of the

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[21] Id. at 3:65-4:25.

IPR2014-01133   Patent 7,218,923

messages." Furthermore, D'Aviera's isolation engine 225 cannot be the claimed

diverting unit, because it intercepts all outbound operations of the application

program 210.

Independent claim 1, for example, recites a method for controlling

application programs in a communication terminal, the method comprising, *inter*

alia, "diverting a message of the messages to a controlling entity residing in the

communication terminal; and based on the message, controlling in the controlling

entity whether the application program behaves in a predetermined manner in the

communication terminal, the controlling being performed before the message is

transmitted from the communication terminal to the communication network,"

(emphasis added). D'Aviera fails to teach or suggest at least "diverting a message

of the messages [sent towards a communication network] to a controlling entity."

D'Aviera is directed to a system and method for controlling transmission of

information using an isolation engine 225 that intercepts outbound operations of an

application program 210 that is attempting to send messages to the Internet via a

network module 220.[22] As shown in FIG. 2 of D'Aviera, reproduced below, the

application program 210 receives information from the INTERNET through the

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[22] D'Aviera at Abstract; see FIG. 2 of D'Aviera.

28

IPR2014-01133   Patent 7,218,923

network module 220, which processes a set of protocol layers working together for
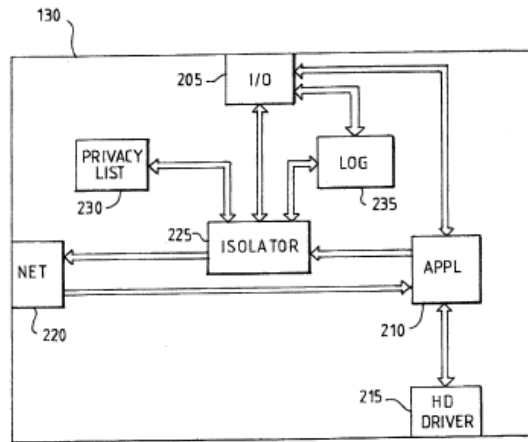
defining communication over the INTERNET.[23]

FIG. 2

Information to be sent to the INTERNET is intercepted by an isolator engine

225, which in turn retransmits the information to the network module 220.[24] This

technique allows the isolator engine 225 to intercept all the outgoing messages that

the application program attempts to send to the INTERNET, in a manner that is

completely transparent to the application program 210.[25] The user can start

execution of the isolator engine 225 at block 303, for example, with a double click

of the mouse on a corresponding icon.[26]

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[23] Id. at p.3, ll. 18-21.
[24] Id. at p.3, ll. 21-24.
[25] Id. at p.5, ll. 11-15.
[26] Id. at p.4, ll. 3-5.

Petitioners asserted that "the isolator engine 225, which functions as a controlling unit, verifies whether at least one privacy item stored in a privacy list matches the retrieved information and prevents the sending of the retrieved information if the result of the verification is positive." Petition at 34-35. Accordingly, Petitioners have characterized D'Aviera's isolator engine 225 as corresponding to the claimed controlling entity.

Patent Owner notes that D'Aviera's isolator engine 225 is a standalone application, the execution of which can be initiated by double clicking on an icon.[27] To the extent that the isolator engine 225 could correspond to the claimed controlling entity, which Patent Owner disagrees, Petitioner has not shown where D'Aviera discloses the claimed step of "diverting a message of the messages [sent towards a communication network] to a controlling entity," as recited in claim 1.

For example, D'Aviera at Abstract states that "[p]referably the invention comprises an 'isolation engine' 225 which intercepts all outbound operations of an application program 210 which is attempting to send messages to the internet via network module 220," (emphasis added). Accordingly, D'Aviera merely discloses that, when the isolation engine 225 is executing, outbound operations or messages from application program 210 are intended to be received by the isolation engine

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[27] Id.

IPR2014-01133   Patent 7,218,923

225. D'Aviera does <u>not</u> disclose anything between the application program 210 and the isolation engine 225 that could "divert" the outbound operations or messages.

As discussed above, to meet the claimed diverting step, there must be something that "diverts" a message of messages destined to the network to a controlling entity in a communication terminal. Because, in D'Aviera, outbound operations or messages from application program 210 merely pass through the isolation engine 225 before being transmitted to the network module 220, no outbound operation or message is actually "diverted" to any entity that could possibly constitute the claimed controlling entity. For at least these reasons, D'Aviera cannot teach or suggest the claimed "diverting" step. By pointing to the isolator engine 225 for both the diverting and control functions, the Petitioner vitiates the diverting element.

Independent claim 24, for example, recites a terminal for a communication system, the terminal comprising, *inter alia*, "a diverting unit configured to <u>divert a message of the messages sent from the application program</u> and destined for the communication network <u>to a controlling entity</u> residing in the terminal," (emphasis added). D'Aviera fails teach or suggest at least these limitations.

As discussed above, D'Aviera does not disclose anything that could "divert" outbound messages sent towards the network 104 to the isolator engine 225. For at

31

least these reasons, D'Aviera fails to teach or suggest, "a diverting unit configured

to divert a message of the messages sent from the application program and destined

for the communication network to a controlling entity residing in the terminal," as

recited in claim 24.

Claim 26 depends from claim 24 and recites "the controlling entity is

configured to reside in a tamper resistant area of the terminal." D'Aviera fails to

teach or suggest these limitations.

For example, D'Aviera discloses that computer programs shown in FIG. 2

are installed onto a hard disk from CD-ROM or directly loaded into the working

memory from CD-ROM, and that a user can start execution of the isolator engine

225 with a double click of the mouse on a corresponding icon.[28] Accordingly,

D'Aviera at best discloses the isolator engine 225 is computer software program

installed onto a regular hard disk or a regular CD-ROM.

To the extent that D'Aviera's isolator engine 225 could correspond to the

claimed controlling entity, D'Aviera does not disclose that the isolator engine 225

could be configured to reside in anything of the client computer 110 that could

include a tamper resistant mechanism. Accordingly, D'Aviera cannot teach or

suggest a combination, wherein "the controlling entity is configured to reside in a

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[28] Id. at p. 3, ll. 6-11 and p.4, ll. 3-5.

tamper resistant area of the terminal," as recited in claim 26. For at least these reasons, D'Aviera cannot anticipate claim 26.

Claims 2, 4-5, 8, 25, 31, 39 and 40 either recite or require claim elements similar to those recited in independent claims 1 and 24. Accordingly, D'Aviera cannot anticipate claims 2, 4-5, 8, 25, 31, 39 and 40 for at least the same reasons as independent claims 1 and 24. Therefore, Ground II should be denied.

D.   Ground III Should Be Denied.

Patent Owner submits that no *inter partes* review should be instituted based on Ground III, because claims 24, 26 and 40 of the '8923 patent are not anticipated by Williamson.

Independent claim 24 recites a terminal for a communication system, the terminal comprising, *inter alia*, "a diverting unit configured to divert a message of the messages sent from the application program and destined for the communication network to a controlling entity residing in the terminal, wherein the controlling entity is configured to control, based on the message and before the message is transmitted to the communication network, whether the application program behaves in a predetermined manner in the communication terminal," (emphasis added). Williamson fails teach or suggest at least these elements.

IPR2014-01133   Patent 7,218,923

Williamson is directed to preventing computer viruses from spreading by analyzing outbound data.[29] As shown in Williamson's FIG. 9, reproduced below, Williamson uses a Virus Anti-Propagation Software (VAPS) that runs within the *network stack*, to handle *all requests* to send outbound data from the workstation 910, and operates to restrict the propagation of viruses within the network.[30] As demonstrated below, Petitioner's arguments with respect to Williamson cannot be sustained, at least because Williamson fails to teach or suggest the diverting unit recited in Claim 24.
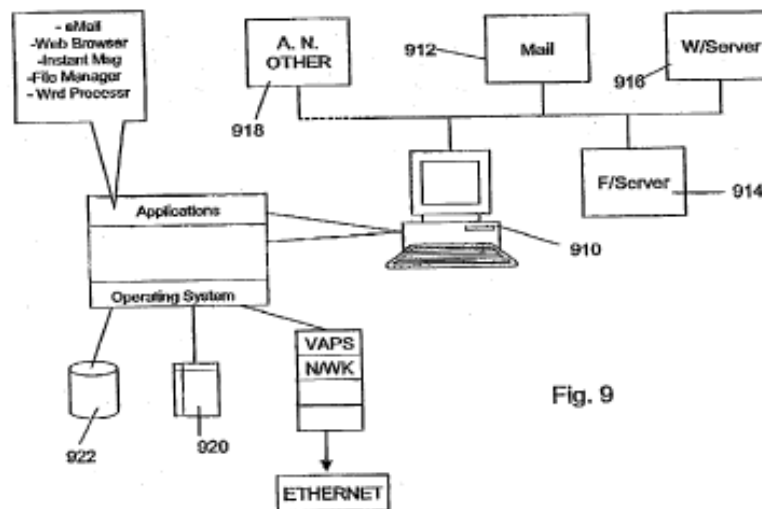

Fig. 9

Petitioner asserted that "the VAPS [(Viral Anti-propagation Software)], which functions as a <u>controlling unit</u> that 'handles all requests to send outbound data from the workstation 910,'" and that "Williamson inherently discloses that the

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[29] Williamson at Abstract and ¶ [0062].
[30] Williamson at ¶¶ [0081]-[0082].

VAPS is located in a 'tamper resistant area of the terminal' as in claim 26 of the '923 Patent." Petition at 41, emphasis added. Accordingly, it appears that Petitioner has characterized Williamson's VAPS as corresponding to the claimed controlling entity residing in the terminal.

Patent Owner respectfully notes that, to the extent that the VAPS could correspond to the claimed "controlling entity," which Patent Owner disagrees, Petitioner has not demonstrated where Williamson discloses the claimed "diverting unit." For example, Williamson at ¶ [0082] states that "[a]s with the VPMS, the VAPS handles all requests to send outbound data from the workstation 910, and operates to restrict the propagation of viruses within the network by limiting the extent to which the workstation can engage in what may be thought of as 'unusual' behaviour in contacting other hosts," (emphasis added). Accordingly, Williamson merely discloses that VAPS handles *all* requests to send outbound data. Williamson does not disclose "diverting" some of the requests (sent to the network) to the VAPS for processing.

As discussed above, to meet the claimed diverting unit, there must be something that "diverts" an outbound request from being sent to the network to being sent a controlling entity in a communication terminal. Because, all outbound requests from the application merely pass through the VAPS before being transmitted to the network, no request is actually "diverted" to the VAPS. For at

IPR2014-01133   Patent 7,218,923

least these reasons, Williamson cannot teach or suggest the claimed diverting unit.

By pointing to VAPS for both the diverting unit and the controlling entity, the

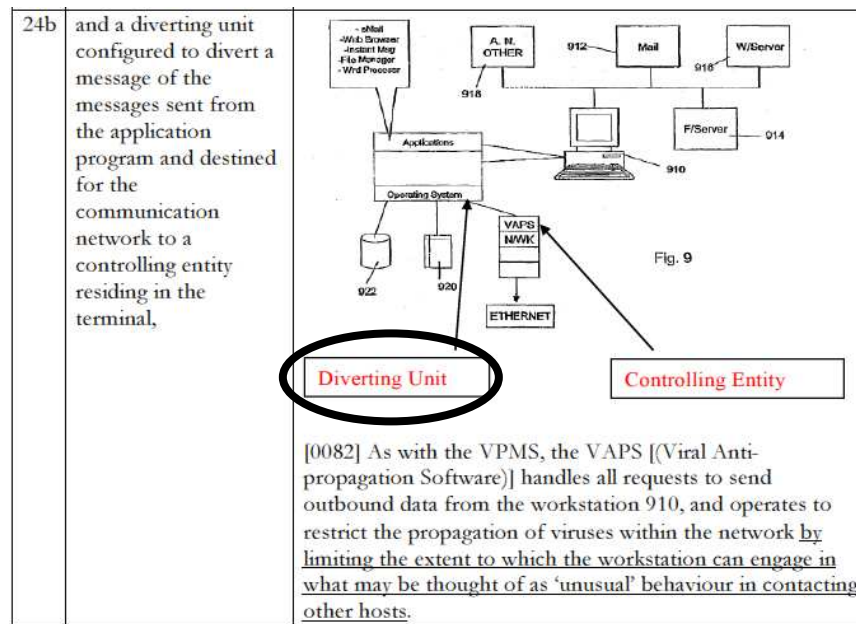Petitioner vitiates the diverting element.

Moreover, Petitioners' own expert declaration further illustrates Petitioner's

failure to demonstrate where Williamson discloses the claimed diverting unit. For

example, in the claim chart, Dr. Williams provided a copy of Williamson's FIG. 9

and manually added an annotation, pointing to the juncture of the operating system

and the VAPS as if it teaches the claimed "diverting unit." [31] See below

reproduction of the partial claim chart in Dr. Williams' Declaration. In the body of

his Declaration, Dr. Williams also could not identify which part of Williamson is

relied upon as constituting the claimed "diverting unit." [32] Accordingly, Dr.

Williams acquiesced to Williamson's non-disclosure of the claimed diverting unit.

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[31] Declaration of Tim A. Williams, Ph.D. (Ex. 1011, "Williams Declaration"), at
Appendix A-3, p.2.
[32] Id. at ¶ 84.

IPR2014-01133   Patent 7,218,923

Fig. 9

[0082] As with the VPMS, the VAPS [(Viral Anti-propagation Software)] handles all requests to send outbound data from the workstation 910, and operates to restrict the propagation of viruses within the network by limiting the extent to which the workstation can engage in what may be thought of as 'unusual' behaviour in contacting other hosts.

For at least these reasons, Williamson fails to teach or suggest, "a diverting unit configured to divert a message of the messages sent from the application program and destined for the communication network to a controlling entity residing in the terminal, wherein the controlling entity is configured to control, based on the message and before the message is transmitted to the communication network, whether the application program behaves in a predetermined manner in the communication terminal," as recited in claim 24.

Claim 26 depends from claim 24 and recites "the controlling entity is configured to reside in a tamper resistant area of the terminal." Williamson fails to teach or suggest this element.

37

Williamson merely discloses that the VAPS is a regular application software that is installed in and run on workstation 910 within the network stack.[33] To the extent that Williamson's VAPS could correspond to the claimed controlling entity, Williamson does not disclose that the VAPS could be configured to reside in a tamper resistant area. Accordingly, Williamson cannot teach or suggest a combination, wherein "the controlling entity is configured to reside in a tamper resistant area of the terminal," as recited in claim 26. For at least these reasons, Williamson cannot anticipate claim 26.

Claim 40, while of different scope from claim 24, recites subject matter similar to that recited in claim 24. Accordingly, Williamson cannot anticipate claim 40 for at least the same reasons as independent claim 24. Therefore, Ground III should be denied.

E.   Ground IV Should Be Denied.

Patent Owner submits that no *inter partes* review should be instituted based on Ground IV, because claims 1-5, 8, 9, 24-26, 31, 33, 39 and 40 of the '8923 patent are not obvious over Calder in view of Richardson.

Independent claim 1, for example, recites a method for controlling application programs in a communication terminal, the method comprising, *inter*

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[33] Williamson at ¶[0081].

IPR2014-01133   Patent 7,218,923

alia, "<u>sending messages from an application program towards a communication</u>

<u>network</u> … ; [and] <u>diverting a message of the messages to a controlling entity</u>

<u>residing in the communication terminal</u>," (emphasis added). Calder and

Richardson, taken either alone or in combination, fails to teach or suggest at least

these elements.

Calder is directed to a method for virtualizing user interfaces and a system

for securing an application for execution in a computer, using an interception

module. [34] The interception module, which can be included in an application

package 115, intercepts *system calls* that are made by the application program to

the operating system, and acts as a "virtual layer" *between the operating system*

and the application. [35] As shown in Calder's FIG. 4, reproduced below, an

interception module, which is part of the virtual layer 415, intercepts part or all of

the system calls made by the application 405 and provides virtual allocation and

de-allocation routines 425, a virtualized registry 430, a virtualized files system

435, a virtual other environment 440, a virtualized network 445, and a virtualized

graphics interfaces 450. [36]

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[34] Calder at Abstract.
[35] Id. at ¶¶ [0073] and [0098].
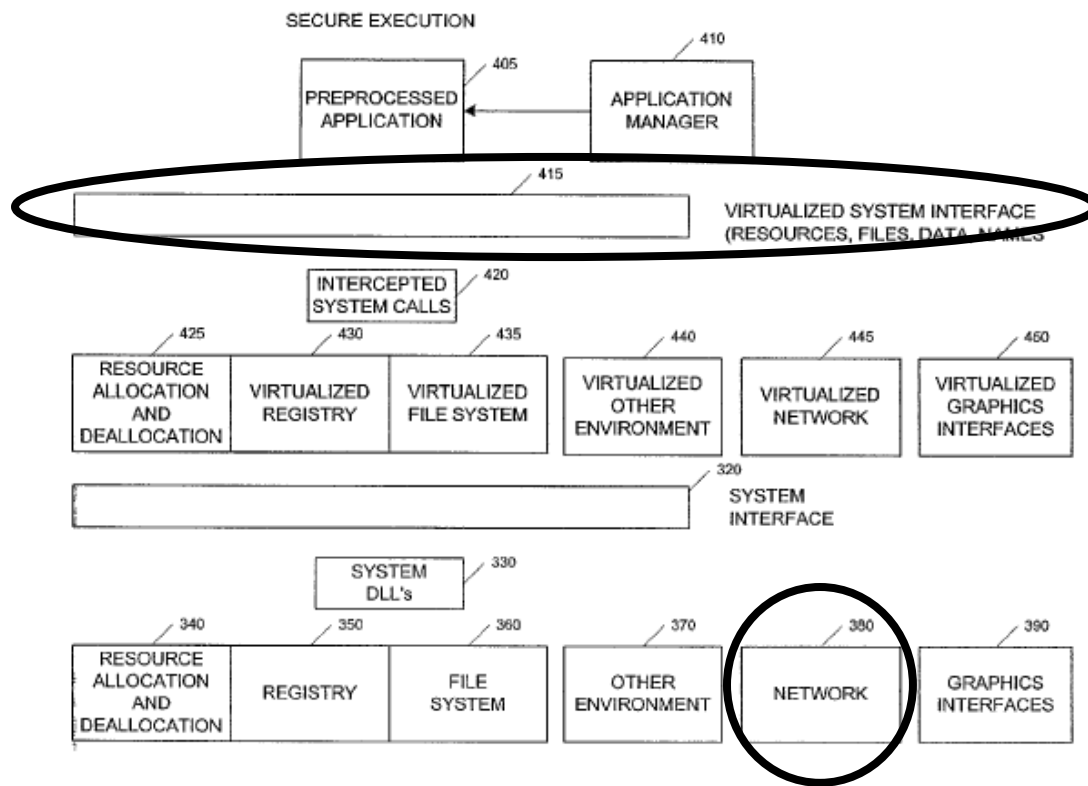[36] Id. at ¶¶ [0084]-[0085].

FIG. 4

Petitioners asserted that "Calder discloses an 'interception module' that, like the controlling entity of the '923 Patent, prevents the application from behaving inappropriately and adversely affecting the operation of the computer." Petition at 43, emphasis added. Petitioners further asserted that Calder inherently discloses a program for diverting messages [system calls] from application programs. Williams Declaration at ¶85." Petition at 44, emphasis added. Accordingly, it appears that Petitioners have characterized Calder's system calls as corresponding to the claimed messages sent towards the communication network and

characterized Calder's interception module as corresponding to the claimed controlling entity. Petitioners have not explained how Calder inherently discloses a program for diverting system calls.

Patent Owner notes that Calder's system calls cannot reasonably correspond to the claimed messages sent towards the communication network. Calder's system calls are made by the application program to the operating system to request services from the operating system's kernel.[37] Calder's system calls are not configured for being transmitted through a communication network. System calls that are <u>not</u> organized and suitable for transmission through a communication network cannot reasonably correspond to the claimed messages sent towards the communication network. Accordingly, Calder cannot teach or suggest, "sending messages from an application program towards a communication network," as recited in claim 1.

Further, to the extent that Calder's interception module (or virtual layer 415) could correspond to the claimed controlling entity, which Patent Owner disagrees, Calder does not disclose anything that could perform the claimed diverting step. Calder's merely discloses that part or all of the system calls made from the application 405 to the operating system are intercepted by the interception module,

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[37] Id. at ¶ [0098].

which is part of the virtual layer 415.[38] Calder does <u>not</u> disclose that any of the system calls could be made to any entity other than the operating system.

As discussed previously, to meet the claimed diverting step, there must be something that "diverts" a message of messages being sent to a network to being sent to a controlling entity residing in a communication terminal.   In Calder, the system calls are <u>not</u> destined to a communication network. Rather, Calder's system calls are all destined to the operating system to request kernel services. Therefore, contrary to the Petitioners' assertion of implicit disclosure, Calder cannot teach or suggest, explicitly or inherently, anything that could perform the claimed "diverting" step.

As discussed above, Richardson also cannot teach or suggest anything that could perform the claimed diverting step, and therefore fails to cure the deficiencies of Calder. For at least these reasons, Calder and Richardson cannot render obvious claim 1. The Petitioner, once again, vitiates the diverting element.

Claim 24 recites a terminal for a communication system, the terminal comprising, *inter alia*, "a diverting unit configured to divert a message of the messages sent from the application program and destined for the communication network to a controlling entity residing in the terminal," (emphasis added). Calder

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[38] Id. at ¶ [0084].

and Richardson, taken either alone or in combination, fails to teach or suggest at least this element.

As discussed above, Calder cannot teach or suggest anything that could perform the claimed "diverting" step. Accordingly, Calder does not disclose any diverting unit that could divert the system calls to the interception module. Richardson also cannot teach or suggest any diverting unit that could divert the system calls to the interception module. Therefore, Richardson fails to cure the deficiencies of Calder. For at least these reasons, Calder and Richardson, alone or in combination, cannot render obvious claim 24.

Claim 26 depends from claim 24 and recites "the controlling entity is configured to reside in a tamper resistant area of the terminal." Calder and Richardson, taken either alone or in combination, fail to teach or suggest this element.

Calder discloses that an application package 115 is electronically transferred from a server 120 to a client computer 140 and executed on the client computer 140, and that the application package 115 may include an application binary (also called application program) and an interception module.[39] Accordingly, to the extent that Calder's interception module could correspond to the claimed

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[39] Id. at ¶¶ [0070]-[0075].

controlling entity, which Patent Owner disagrees, Calder at best discloses that the interception module is a part of the application package 115 transferred to and executed on Calder's client computer 140.

Calder does not disclose that the interception module could be configured to reside in a tamper resistant area. Accordingly, Calder cannot teach or suggest a combination, wherein "the controlling entity is configured to reside in a tamper resistant area of the terminal," as recited in claim 26.

As discussed above, Richardson also cannot teach or suggest the claimed controlling entity configured to reside in a tamper resistant area. Accordingly, Richardson fails to cure the deficiencies of Calder. For at least the above reasons, claim 26 is not obvious over Calder and Richardson.

Claims 2-5, 8, 9, 25, 31, 33, 39 and 40 either recite or require claim elements similar to those recited in independent claims 1 and 24. Accordingly, Calder and Richardson cannot render obvious claims 2-5, 8, 9, 25, 31, 33, 39 and 40 for at least the same reasons as independent claims 1 and 24. Therefore, Ground IV should be denied.

VI.   CONCLUSION

In view of the foregoing, no reasonable likelihood has been established that Petitioners would prevail with respect to at least one of the challenged claims. Accordingly, Petitioners have not met the statutory threshold required by 35 U.S.C.

IPR2014-01133   Patent 7,218,923

§ 314(a). Therefore, the Board should <u>not</u> institute *inter partes* review of the '8923

patent, and all grounds presented in the Petition should be denied.

                                        Respectfully Submitted,

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IPR2014-01133   Patent 7,218,923

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e), the undersigned certifies that, on this 23rd day of October, 2014, a copy of the following materials:

- PATENT OWNER'S PRELIMINARY RESPONSE

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